

**ACANTHOSCELIDES WINDERI, NEW SPECIES,
(COLEOPTERA: BRUCHIDAE) ASSOCIATED
WITH MIMOSA SPP. (LEGUMINOSAE:
MIMOSOIDEAE) FROM BRAZIL¹**

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ABSTRACT: During a survey of *Mimosa* species in Brazil for potential biocontrol agents to control *Mimosa pigra* recently introduced into Australia, a new species, *Acanthoscelides winderi*, was reared from seeds of *Mimosa pigra* and *Mimosa* sp. The species is named after the collector.

John Winder recently collected several series of specimens of a new species of *Acanthoscelides* reared from *Mimosa* sp. and *M. pigra*. All localities are in southeastern Brazil. Since this species is one of those being considered for biological control of *M. pigra* introduced into Australia, a name is needed for reference.

Acanthoscelides winderi Kingsolver, new species

Fig. 1-3

Body length. 2.3-2.6 mm; width-1.5-1.7 mm.

Color. Integument yellowish red to dark red, eyes piceous. Vestiture of yellow, white, and dark brown slender hairs in mottled pattern (fig. 1) on dorsal surface. Head sparsely clothed; pronotum predominantly yellow with short, narrow, white spot on basal lobe and scattered dark brown hairs on paired apical and median, diagonal, slightly elevated gibbositities. Elytra with 1st, 2nd, 4th, 6th, and 10th intervals yellow, 3rd, 5th, 7th, 8th, and 9th intervals with alternating dark brown and yellow, elongate spots. Pygidium predominantly yellow, with 3 vague basal spots and 1 subapical median spot white, ventral border fringed with yellow, apical 1/2 with prominent, nearly bare, paired dark red reniform spots (fig. 1). Abdomen with lateral row of white spots set in broad band of yellow; metepisternum yellow with white margin.

Structure. Body short, broad, subdepressed. Head turbiniform, eyes prominent, ocular sinus about 1/2 length of eye; vertex microfoveolate, each foveola bearing a hair; frons with fine, short carina flanked by rugose punctation, clypeus with basal 1/2 rugosely punctate, apical 1/2 finely granulose, antenna serrate from 5th segment, 4th slightly eccentric, terminal segment subelliptical. Pronotum campaniform, strongly convex, lateral margins sinuate, apical margin evenly rounded, basal margin straight with somewhat angulate basal lobe; surface microfoveolate, foveolae mostly discrete, separated by a diameter, nearly concealed by vestiture except sparse on dark red gibbositities; prosternum short, triangular, not separating coxae at apices. Scutellum quadrate, bidentate apically. Elytra slightly longer than wide, convex except subdepressed between 4th striae, striae prominent but not deep, 3rd, 5th, 7th, and 9th intervals slightly wider than 1st, 2nd, 4th, 6th, and 8th; intervals minutely imbricate, concealed by vestiture, mesosternum subtriangular, apex rounded, postmesocoxal sulci not

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meeting on midline. Abdomen with 1st sternite longer than remaining sternites in ♂, subequal in ♀; terminal sternite in ♂ broadly emarginate to receive apex of pygidium, in ♀ evenly rounded; ♂ pygidium gently convex, ♀ pygidium nearly flat, surface finely imbricate, nearly concealed by vestiture except sparse on dark red triangular spots. Male genitalia with median lobe (fig. 2) moderately broad, internal sac trilobed; ventral valve bluntly rounded apically, lateral margins incurvate, dorsal valve subtriangular, densely setose; basal 1/3 of internal sac with minute blunt denticles gradating to minute quadrate denticles, middle of sac with transverse cluster of small spines, lateral lobes of sac partly lined with minute triangular denticles; lateral lobes (fig. 3) broad, cleft to 1/2 their length. Pro- and mesolegs normal for genus, metafemur moderately incrassate, pecten with 1 long and 2 or 3 short denticles, metatibia with lateral, ventral, and dorsomedial carinae distinct and complete to apex, lateroventral carina obsolete in apical 1/5, mucro short, acute; lateral denticles short, corona with 3 denticles.

Holotype ♂. BRAZIL: Panorama (SP), 26 April 1981, ex seed pods *Mimosa* sp., J.A. Winder (149-A-1). Allotype ♀ 2 ♂, 2 ♀ paratypes, same data.

Primary types are deposited in the Departamento de Zoologia (Museu), Universidade Federal de Paraná, Curitiba, Brazil.

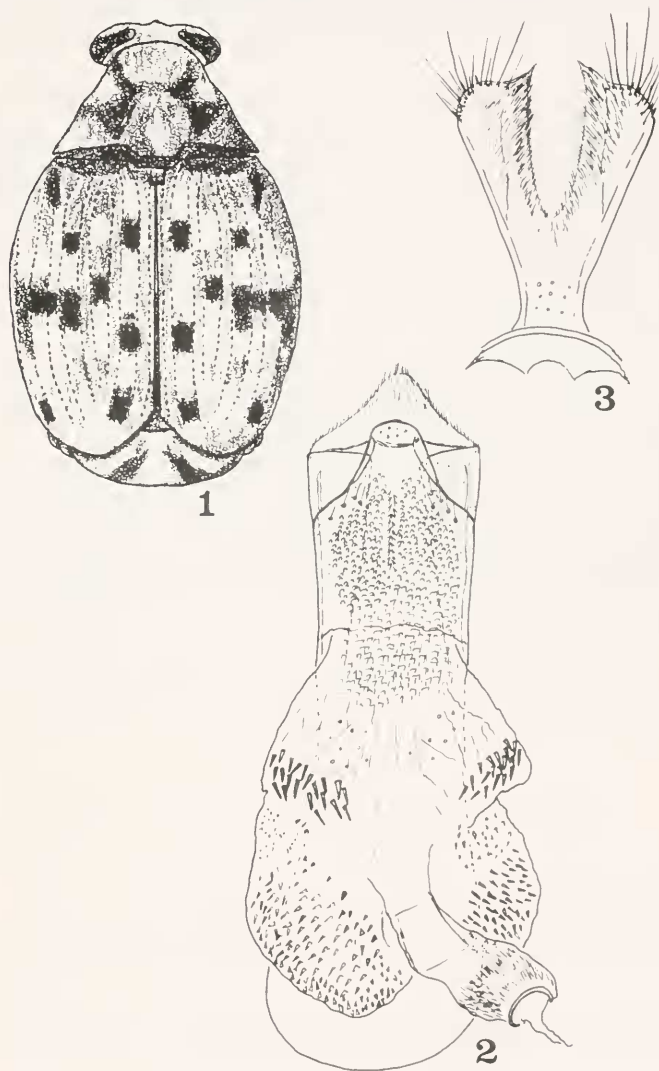
Other paratypes. BRAZIL: Uberlandia (MB), 2 May 1981, ex seed pods *Mimosa* sp., J.A. Winder (173-A), 47 ♂ ♀; Ribeirao Preta (SP), 9 May 1981, ex seed pods *Mimosa* sp., J.A. Winder (194-A-1), 45 ♂ ♀; Santa Rita do Araguaia (GO), 28 April 1981, ex seed pods *Mimosa* sp., J.A. Winder (158-2), 1 ♀; Pedra Azul (MG), 20 February 1981, ex seed pods *Mimosa pigra*, J.A. Winder (99-2), 12 ♂ ♀; Vassouras (RJ), 23 March 1981, J.A. Winder (131-B), 8 ♂ ♀. Paratypes are deposited with the primary types and in the C.D. Johnson collection, Flagstaff, Arizona; the National Museum of Natural History, Washington, D.C.; the Instituto Miguel Lillo, Tucumán, Argentina; the Museu Paraense Emilio Goeldi, Belém, Brazil, and the CSIRO Museum, Canberra City, Australia.

This species is in the *mexicanus* group (Johnson, 1983: 6) and is apparently closely related to *Acanthoscelides mexicanus* (Sharp); *lapsanae* (Motschulsky), and *piceoapicalis* (Pic) differing principally in its more extensive dark red pygidial spots, and in the armature of the male genitalia. In *A. mexicanus*, *lapsanae*, and *piceoapicalis*, the pygidial spots are small and submarginal, the basal white patches on the pygidium are vaguely defined, and the lateral pockets of the internal sac are completely lined with thorn-like spines, whereas in *A. winderi*, new species, the pygidial spots are large and triangular or falcate, the basal white patches are large and conspicuous, and each of the lateral pockets of the internal sac has a transverse row of slender spines at the middle, and are only partly lined with minute denticles. Furthermore, in *piceoapicalis*, the apical 1/5 of the elytron is piceous to black whereas the other three species are patterned to the apex of the elytra. The lateral lobes of *A. winderi* are broad as in *lapsanae* and *piceoapicalis* (Johnson, 1983, figs. 259, 406); those of *mexicanus* are slender (ibid, fig. 329). *Acanthoscelides winderi* will key to *lapsanae* in Johnson's key.

I am pleased to name this species for John A. Winder who collected all of the specimens upon which this description is based.

LITERATURE CITED

Johnson, C.D. 1983. Ecosystematics of *Acanthoscelides* (Coleoptera: Bruchidae) of southern Mexico and Central America. Misc. Publ., Entomol. Soc. of Amer. 56: 1-370.



Figs. 1-3, *Acanthoscelides winderi*, n. sp. 1. Dorsal habitus. 2. Male genitalia, medial lobe, ventral aspect. 3. Male genitalia, lateral lobes, ventral aspect.

BOOK REVIEW

THE AUSTRALIAN CRICKETS (ORTHOPTERA: GRYLLIDAE). Daniel Otte and Richard D. Alexander. 1983. Academy of Natural Sciences of Philadelphia Monograph 22. 477 pp. \$45.00.

This is a major taxonomic monograph that deals with an important fauna in some unusual and noteworthy ways.

Otte and Alexander state that when they undertook their studies of Australian crickets they presumed most species were known. However, in their monograph 376 of 492 species are new, as are 41 of 85 genera. And this is not a matter of splitting taxa recognized by previous workers. Nearly all new taxa are based on specimens taken by the authors during a year of intensive field work throughout Australia and Tasmania. The chief cause of their finding so much more diversity than previous collectors is their use of the male's call to distinguish species in the field. When they entered a new locality, they determined how many species were calling and set about collecting at least one of each. They rightly emphasize that cricket calls are not just one more character that can be used in species discrimination. Male calling songs have a direct relation to species status — females use them in seeking conspecific mates.

This book is beautifully and abundantly illustrated. Insect lovers will gain pleasure in leafing through the pages and viewing the varied shapes and sonagrams (calls) of Australian crickets. The approximately 3070 drawings, arranged in 357 "figures," include 120 whole crickets (representing nearly every genus), 2270 identifying morphological features, 310 sonagrams, and 340 distribution maps. The illustrations accompany appropriate text and are arranged for convenient comparisons of related species.

This monograph is unusual in its thrifty choice of what's included and in its avoidance of redundancy. For example, synonymies are brief and streamlined, and the 905 collecting localities mapped and described in the introduction are thereafter represented by a simple code. One instance where brevity is a flaw is the book's indexing. Its only index is taxonomic and each taxon is referenced to a single page (not always an appropriate one; and some taxa are omitted — e.g. *Eurepa* and *Gryllulus*). This leads me to another flaw — internal inconsistencies and mistakes occur more frequently than one expects in a work otherwise so compelling. Nonetheless, in most respects this is a monograph that other monographers should emulate.

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BOOKS RECEIVED AND BRIEFLY NOTED

INSECTS ON NETTLES, GRASSHOPPERS, SOLITARY WASPS, INSECTS AND THISTLES. Various authors. 1983. Naturalists Handbooks Nos. 1, 2, 3, & 4.

A series of small books for "sixth formers and others without a university training in biology." Each features four colored plates and keys to identification of British insects.

SYSTEMATICS AND BIONOMICS OF *ANTHOPHORA*: THE BOMBOIDES GROUP AND SPECIES GROUPS OF THE NEW WORLD (Hymenoptera: Anthophoridae). R.W. Brooks. 1983. Univ. Calif. Press. 86 pp. \$8.50 pbk.

The species groups of *Anthophora* (s. str.) in No. America and the life history of *Anthophora bomboides stanfordiana* Cockerell.